

## **Indiana State Teachers' Retirement Fund**

Annual Actuarial Valuation

as of June 30, 2009

### **Nyhart**

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January 29, 2010

February 9, 2010

***The Board of Trustees  
Indiana State Teachers' Retirement Fund  
Indianapolis, IN***

***Dear Board Members:***

An actuarial valuation is prepared annually for the Indiana State Teachers' Retirement Fund. Submitted in this report are the results of the June 30, 2009 actuarial valuation.

**Census Data and Asset Information**

The member census data and the asset information for this valuation were furnished by the Chief Financial Officer and Staff. Their efforts and cooperation in furnishing these materials are acknowledged with appreciation. We did not audit the information provided, but we did review it thoroughly for reasonableness and compared it with the prior year's submission for consistency.

**Assumptions and Methods**

The actuarial assumptions used in the June 30, 2009 valuation were adopted by the Board pursuant to the Experience Study of August, 2008, which reflects the experience period from July 1, 2002 to June 30, 2007. Assumptions are summarized in the Assumptions and Methods section of this report. These assumptions and methods have been used to develop the Annual Required Contribution and are consistent with the accounting requirements detailed in GASB Statements No. 25, No. 27, and No. 50.

**Funding Objective**

The Indiana State Teachers' Retirement Fund Pre-1996 Account is funded on a pay-as-you-go basis from the State of Indiana.

The funding objective of the Indiana State Teachers' Retirement Fund 1996 Account is to establish and receive contributions that, when invested at the assumed rate of return, will ultimately accumulate assets over each member's working lifetime that will be sufficient to pay expected retirement allowances. As such, an employer contribution rate is calculated each year. That rate is then considered in conjunction with the goal of maintaining a relatively stable contribution over time.

**Certification**

We have included several schedules and exhibits in this report, including the following:

Summary of Actuarial Assumptions and Methods

Analysis of Financial Experience

Solvency Test

Schedule of Active Members' Valuation Data

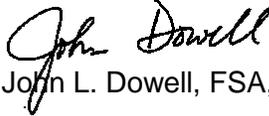
Schedule of Retirants and Beneficiaries

Schedule of Funding Progress

Schedule of Employer Contributions

The valuation was completed under the supervision of a Member of the American Academy of Actuaries with significant experience in valuing employee retirement systems, and was prepared using generally accepted actuarial principles and in accordance with standards of practice prescribed by the Actuarial Standards Board. To the best of our knowledge, this report is complete and accurate and the actuarial methods and assumptions produce results that are reasonable.

Respectfully submitted,



John L. Dowell, FSA, EA, MAAA



Michael Zurek, EA, MAAA

JD/lmw

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## ***Comments***

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### **Contribution Rates**

The Calculated Contribution Rate section shows the calculated rate for the 1996 Account. That rate is determined as if the 1996 Account were a stand-alone plan.

Since the Pre-1996 Account is funded on a pay-as-you-go basis, only the expected benefit payments are shown in the Calculated Contribution Rate section. A similar normal cost plus UAL amortization contribution rate was calculated for the Pre-1996 Account and the two rates have been combined to determine the Annual Required Contribution shown in the GASB Disclosures section.

### **Plan Provisions**

The ad-hoc COLA effective January 1, 2009 was included in the census information provided to us. There is no ad-hoc COLA on January 1, 2010. Instead, retirees were paid a service-related lump sum in September 2009. These changes are reflected in the June 30, 2009 valuation. Any future COLA is estimated by an ongoing assumption of 1.5% annual increases in all pension payments beginning January 1, 2011. We are not aware of any other changes in the plan provisions since the June 30, 2008 actuarial valuation.

### **Census Data**

Census data for the valuation was provided by ISTRF. We have thoroughly examined the data for reasonableness and consistency with prior years, but we did not otherwise audit it.

### **Assumptions and Methods**

The actuarial assumptions used in the June 30, 2009 valuation are based on plan experience from July 1, 2002 to June 30, 2007. The assumptions are the same as those used in the June 30, 2008 valuation.

The asset valuation method has been changed for the June 30, 2009 valuation to treat ASA account balances as fully funded and eliminate their investment experience from the smoothing process.

### **Investment Experience**

Investment return for the year ended June 30, 2009 was lower than the assumed 7.5%. The market value rate of return was -16.3%. Under the asset valuation method, market gains and losses are spread over a four-year period. The Market Value of Assets is currently \$831 million lower than the Actuarial Value of Assets, meaning a portion of the recent losses have not yet been recognized, but will be in the upcoming years.

### **Challenges**

The 1996 Account has been steadily funded since its inception. As membership in that portion of the plan increases, the amount of required contributions will increase as a dollar amount, but should remain relatively stable as a percentage of covered payroll with plan experience causing gradual changes. The primary funding challenge will be for the State to meet the projected pay-as-you-go obligations as shown in the Payout Projections section for the Pre-1996 Account.

## Summary of Key Valuation Results

	6/30/2009			6/30/2008
	Pre-1996 Account	1996 Account	Total	
<b>Member Information</b>				
Number				
Active Members	29,297	45,046	74,343	76,256
Vested Inactive Members	4,450	2,408	6,858	5,187
Nonvested Inactive Members	10,480	28,417	38,897	38,150
Retired Members and Beneficiaries	<u>42,548</u>	<u>1,944</u>	<u>44,492</u>	<u>42,817</u>
Total	86,775	77,815	164,590	162,410
Active Payroll	\$ 2,030,484,195	\$ 2,308,548,026	\$ 4,339,032,221	\$ 4,348,535,867
Annual Benefit Payments				
Annuity	\$ 90,462,396	\$ 3,586,200	\$ 94,048,596	\$ 88,815,636
Pension	<u>671,604,262</u>	<u>32,726,132</u>	<u>704,330,394</u>	<u>655,821,576</u>
Total	\$ 762,066,658	\$ 36,312,332	\$ 798,378,990	\$ 744,637,212
<b>Assets and Liabilities</b>				
Accrued Liability				
ASA Account Balance	\$ 2,379,521,839	\$ 663,534,037	\$ 3,043,055,876	\$ 3,302,511,507
ASA Annuities	820,916,398	37,514,203	858,430,601	807,199,297
Pension	<u>12,826,654,845</u>	<u>2,434,484,238</u>	<u>15,261,139,083</u>	<u>14,640,351,938</u>
Total	\$ 16,027,093,082	\$ 3,135,532,478	\$ 19,162,625,560	\$ 18,750,062,742
Market Value of Assets				
ASA Account Balance	\$ 2,389,885,851	\$ 655,842,807	\$ 3,045,728,658	\$ 3,262,978,218
ASA Annuities	604,123,488	43,384,766	647,508,254	899,770,608
Pension	<u>1,661,876,637</u>	<u>1,844,025,303</u>	<u>3,505,901,940</u>	<u>4,401,210,510</u>
Total	\$ 4,655,885,976	\$ 2,543,252,876	\$ 7,199,138,852	\$ 8,563,959,336
Actuarial Value of Assets				
ASA Account Balance	\$ 2,389,885,851	\$ 655,842,807	\$ 3,045,728,658	\$ 3,442,087,791
ASA Annuities	724,948,186	52,061,719	777,009,905	949,160,312
Pension	<u>1,994,251,964</u>	<u>2,212,830,364</u>	<u>4,207,082,328</u>	<u>4,642,799,291</u>
Total	\$ 5,109,086,001	\$ 2,920,734,890	\$ 8,029,820,891	\$ 9,034,047,394
Unfunded Accrued Liability				
ASA Account Balance	\$ (10,364,012)	\$ 7,691,230	\$ (2,672,782)	\$ (139,576,284)
ASA Annuities	95,968,212	(14,547,516)	81,420,696	(141,961,015)
Pension	<u>10,832,402,881</u>	<u>221,653,874</u>	<u>11,054,056,755</u>	<u>9,997,552,647</u>
Total	\$ 10,918,007,081	\$ 214,797,588	\$ 11,132,804,669	\$ 9,716,015,348
Funded Percentage				
ASA Account Balance	100.4%	98.8%	100.1%	104.2%
ASA Annuities	88.3%	138.8%	90.5%	117.6%
Pension	<u>15.5%</u>	<u>90.9%</u>	<u>27.6%</u>	<u>31.7%</u>
Total	31.9%	93.1%	41.9%	48.2%
<b>Annual Costs</b>				
Pension Normal Cost	\$ 98,268,768	\$ 123,723,604	\$ 221,992,372	\$ 230,754,599
Calculated Employer Contribution Rate - 1996 Account Only				
		<b>Fiscal 2011</b>		<b>Fiscal 2010</b>
Normal Cost		5.36%		4.97%
Amortization of Unfunded Liability		<u>0.71%</u>		<u>(0.47%)</u>
Total		6.07%		4.50%
Actual Employer Contribution Rate - 1996 Account Only				
		7.50%		7.00%
Pre-1996 Account Only				
	<b>Fiscal 2011</b>			<b>Fiscal 2010</b>
Pension Benefit Payments	784,000,000			737,000,000
Pension Contributions*	772,000,000			730,000,000

\*assume a 4% increase for Fiscal 2010 and a 6% increase for Fiscal 2011.

## ***Unfunded Accrued Liability***

### **Pre-1996 Account**

\$ millions

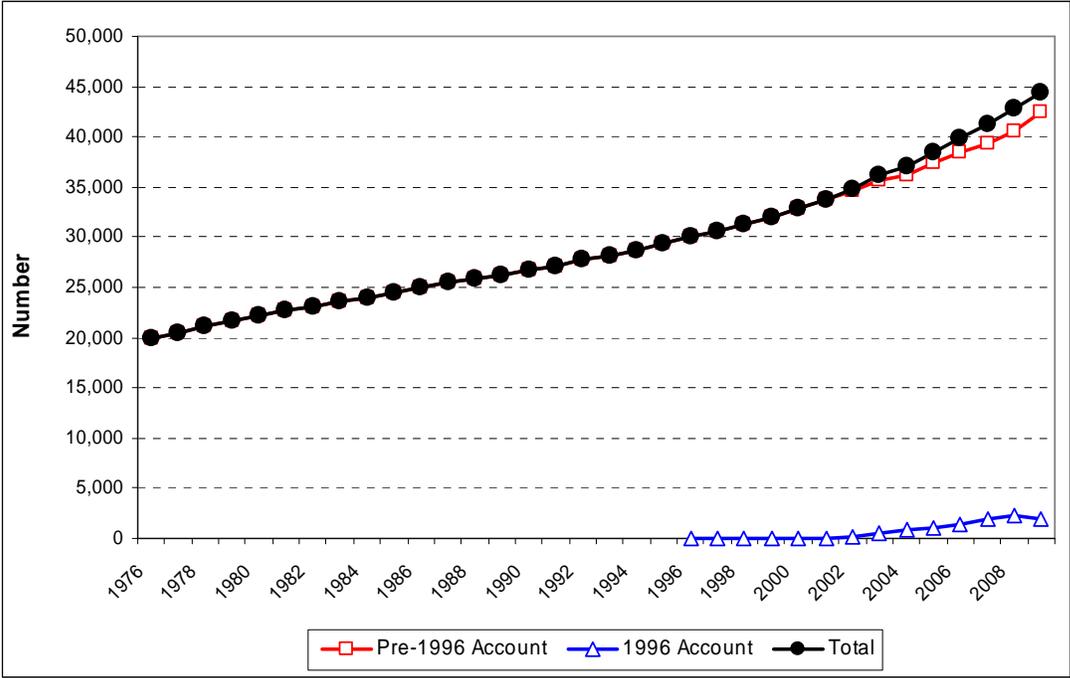
<b>June 30</b>	<b>Accrued Liability</b>	<b>Actuarial Value of Assets</b>	<b>Unfunded Accrued Liability</b>	<b>Funded Percentage</b>
1975	\$ 1,570	\$ 312	\$ 1,258	19.9%
1980	2,843	539	2,304	19.0%
1985	4,023	1,073	2,950	26.7%
1991	7,182	2,161	5,021	30.1%
1992	7,949	2,376	5,573	29.9%
1993	8,508	2,592	5,916	30.5%
1994	9,087	2,809	6,278	30.9%
1995	9,675	2,984	6,691	30.8%
1996	10,283	3,242	7,041	31.5%
1997	10,868	3,678	7,190	33.8%
1998	11,481	4,130	7,351	36.0%
1999	12,173	4,731	7,442	38.9%
2000	12,409	5,210	7,199	42.0%
2001	12,696	5,363	7,333	42.2%
2002	13,498	5,555	7,943	41.2%
2003	13,355	5,728	7,627	42.9%
2004	13,549	5,765	7,784	42.5%
2005	14,254	5,797	8,457	40.7%
2006	15,003	5,478	9,525	36.5%
2007	15,988	5,764	10,224	36.1%
2008	15,792	5,954	9,838	37.7%
2009	16,027	5,109	10,918	31.9%

### **1996 Account**

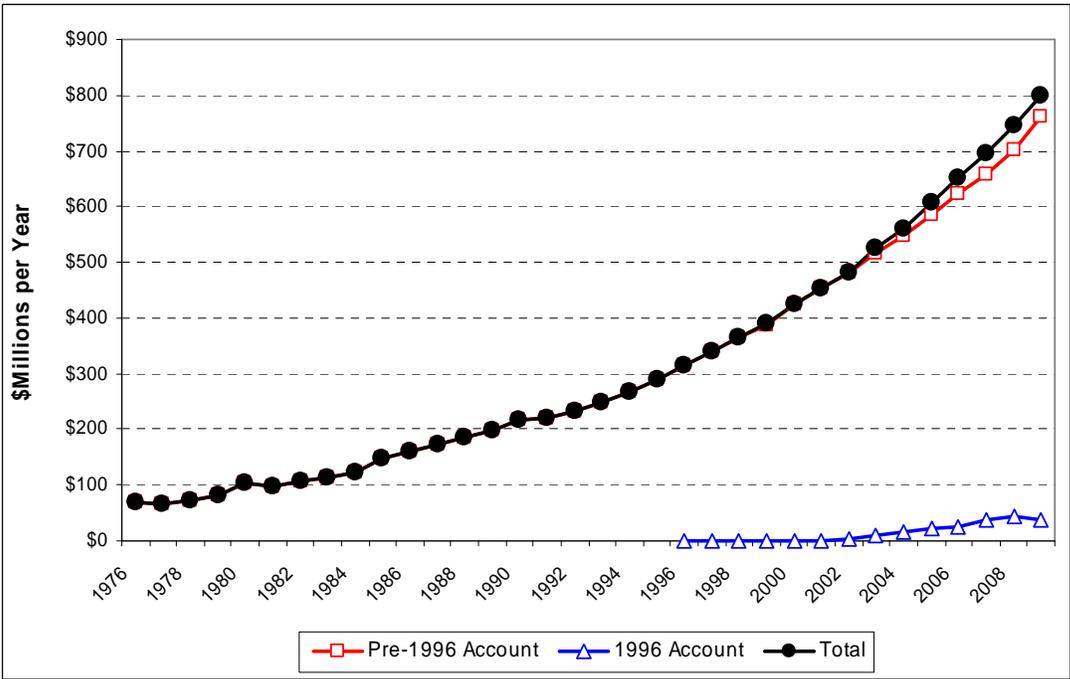
\$ millions

<b>June 30</b>	<b>Accrued Liability</b>	<b>Actuarial Value of Assets</b>	<b>Unfunded Accrued Liability</b>	<b>Funded Percentage</b>
1996	\$ 48	\$ 21	\$ 27	43.8%
1997	176	72	104	40.9%
1998	298	136	162	45.6%
1999	498	240	258	48.2%
2000	706	368	338	52.1%
2001	828	447	381	54.0%
2002	1,167	621	546	53.2%
2003	1,392	826	566	59.3%
2004	1,649	1,039	610	63.0%
2005	2,011	1,268	743	63.1%
2006	2,363	2,209	154	93.5%
2007	2,828	2,713	115	95.9%
2008	2,958	3,080	(122)	104.1%
2009	3,136	2,921	215	93.1%

**Retired Members and Beneficiaries Receiving Benefits**



**Total Retirement Allowances Being Paid**



## Active Member Data

### Pre-1996 Account

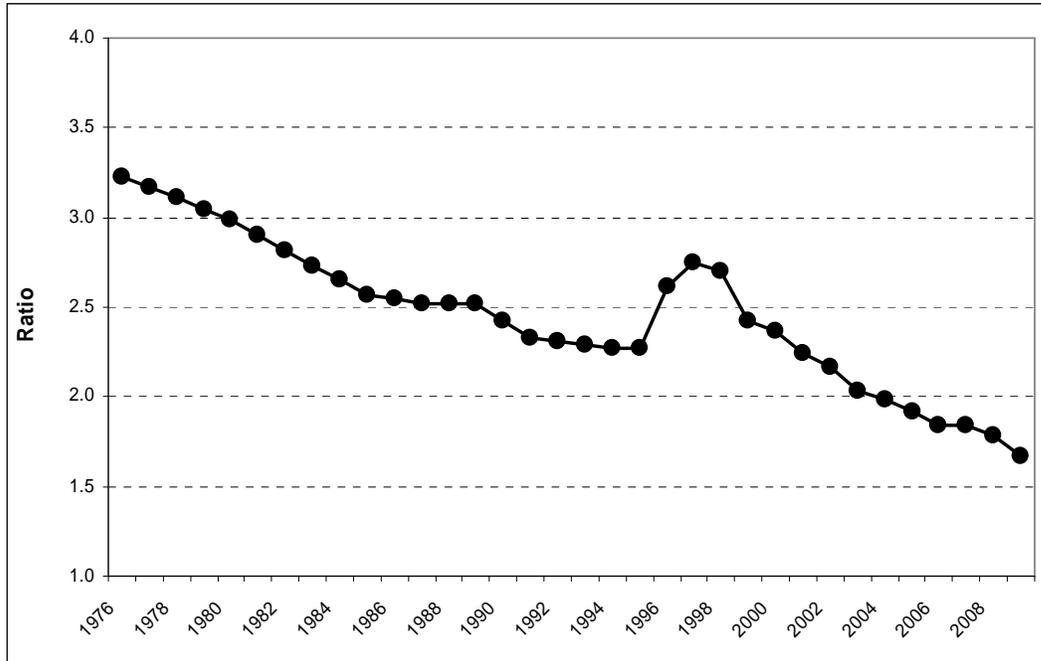
June 30	Number	Valuation Payroll (\$000s)	Average			
			Age	Service	Pay	Pay Increase %
1975	63,932	\$ 749,200	38.7	10.9	\$ 11,719	
1980	66,575	1,107,699	39.7	11.9	16,638	
1985	62,932	1,519,887	41.5	14.2	24,151	
1987	64,157	1,751,709	42.0	14.5	27,303	
1989	65,986	2,044,797	42.6	14.9	30,988	
1991	63,373	2,278,715	43.0	15.4	35,957	
1992	63,980	2,416,263	43.8	16.0	37,766	5.0%
1993	64,594	2,536,165	44.0	16.1	39,263	4.0
1994	65,209	2,614,915	44.1	16.2	40,101	2.1
1995	66,542	2,728,811	44.2	16.2	41,009	2.3
1996	70,183	2,805,823	44.2	15.7	39,979	(2.5)
1997	63,520	2,739,436	45.4	16.9	43,127	7.9
1998	59,030	2,699,183	46.4	18.0	45,726	6.0
1999	56,560	2,755,489	47.4	19.3	48,718	6.5
2000	52,920	2,561,533	48.2	20.1	48,404	(0.6)
2001	50,802	2,564,451	48.7	20.7	50,479	4.3
2002	47,510	2,604,956	49.4	21.5	54,830	8.6
2003	43,705	2,448,271	49.6	21.7	56,018	2.2
2004	41,510	2,384,480	50.1	22.2	57,444	2.5
2005	39,097	2,305,726	50.6	22.7	58,974	2.7
2006	36,994	2,237,380	51.1	23.2	60,480	2.6
2007	36,526	2,376,390	52.1	23.8	65,060	7.6
2008	34,628	2,295,816	52.5	24.6	66,299	1.9
2009	29,297	2,030,484	53.7	26.0	69,307	4.5

### 1996 Account

June 30	Number	Valuation Payroll (\$000s)	Average			
			Age	Service	Pay	Pay Increase %
1996	8,683	\$ 72,506	32.2	1.3	\$ 8,350	
1997	20,686	245,168	33.0	1.8	11,852	41.9%
1998	25,634	395,758	33.6	2.2	15,439	30.3
1999	21,185	538,837	35.3	4.0	25,435	64.7
2000	24,950	631,072	36.4	4.7	25,293	(0.6)
2001	24,846	754,426	36.3	5.5	30,364	20.0
2002	27,873	1,004,515	36.7	6.1	36,039	18.7
2003	29,936	1,136,864	37.0	6.5	37,976	5.4
2004	32,000	1,267,173	37.3	6.9	39,599	4.3
2005	34,826	1,428,604	37.5	7.2	41,021	3.6
2006	36,356	1,565,341	37.7	7.5	43,056	5.0
2007	39,307	1,891,605	38.2	7.8	48,124	11.8
2008	41,628	2,052,719	38.1	8.2	49,311	2.5
2009	45,046	2,308,548	38.3	8.4	51,249	3.9

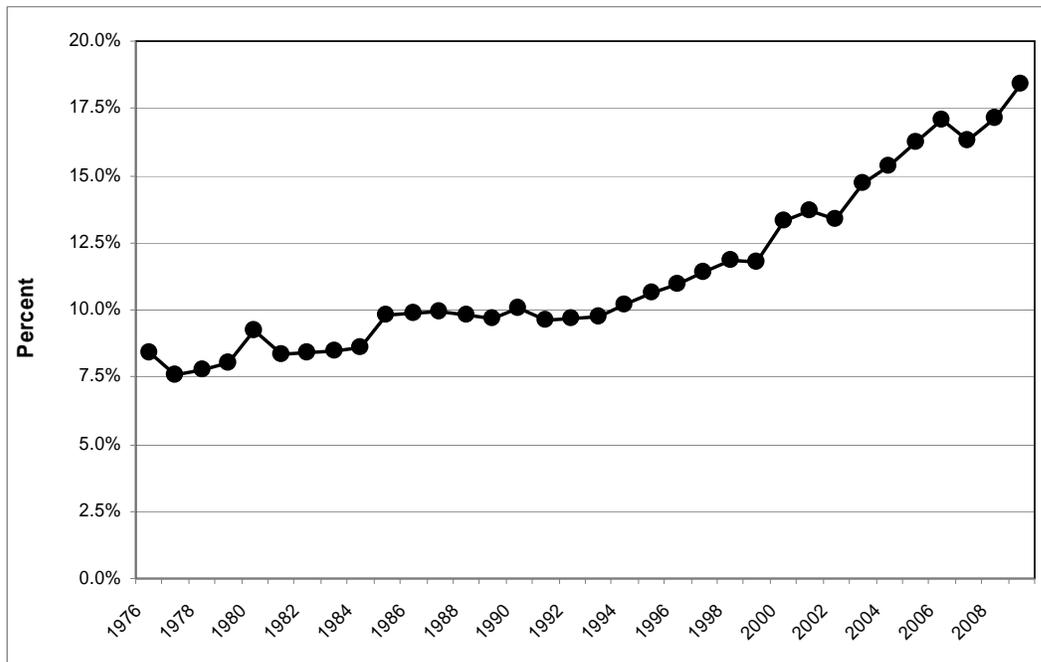
### ***Active Members per Retired Life***

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### ***Total Retirement Allowances as a Percent of Valuation Payroll***

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**Reconciliation of Market Value of Assets**

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	<u>6/30/2008 thru 6/30/2009</u>	<u>6/30/2007 thru 6/30/2008</u>
Market Value, beginning of year	\$ 8,563,959,336	\$ 8,980,793,999
Member Contributions	126,346,525	123,927,759
Employer Contributions	850,156,195	808,128,686
Benefit Payments	(944,286,356)	(961,318,453)
Transfers	<u>2,987,913</u>	<u>427,334</u>
Non-Investment Net Cash Flow	\$ 35,204,277	\$ (28,834,674)
Plan Expenses	\$ (45,209,703)	\$ (6,780,055)
Investment Return	<u>(1,354,815,058)</u>	<u>(381,219,934)</u>
Net Investment Return	\$ (1,400,024,761)	\$ (387,999,989)
Market Value, end of year	\$ 7,199,138,852	\$ 8,563,959,336
Market Value Net Rate of Return	(16.3%)	(4.3%)

**Development of the Actuarial Value of Assets\***

	<u>6/30/2008 thru 6/30/2009</u>
1. Actuarial Value, beginning of year	\$ 5,591,959,604
2. Market Value, beginning of year	5,300,981,118
3. Market Value, end of year	4,153,410,194
4. Non-Investment Net Cash Flow	100,587,278
5. Net Investment Return	
a. Expected $[(.075 \times ((2)+0.5*(4))]$	401,345,607
b. Actual $[(3) - (2) - (4)]$	<u>(1,248,158,202)</u>
6. Current Year Market Value Gain/(Loss) $[(5b) - (5a)]$	\$ (1,649,503,809)
7. Deferred Recognition of Investment Gain/(Loss)	
a. Fiscal 2009 (75% of (6))	\$ (1,237,127,856)
b. Fiscal 2008 (50%)	(375,705,036)
c. Fiscal 2007 (25%)	<u>151,014,848</u>
d. Total $[(a) + (b) + (c)]$	\$ (1,461,818,044)
8. Preliminary Actuarial Value, end of year $[(3) - (7d)]$	5,615,228,238
a. 80% of Market Value, end of year $[80\% \text{ of } (3)]$	3,322,728,155
b. 120% of Market Value, end of year $[120\% \text{ of } (3)]$	4,984,092,233
9. Actuarial Value, end of year $[(8), \text{ but not Greater than } 8(b), \text{ nor Less than } (8a)]$	\$ 4,984,092,233
10. Actuarial Value as a % of Market Value $[(9) / (3)]$	120.0000%
11. Net Investment Return on Actuarial Value $[(9) - (1) - (4)]$	\$ (708,454,649)
12. Actuarial Value Net Rate of Return $[(11) / ((1) + 0.5*(4))]$	(12.6%)

\* The Actuarial Value of Assets developed here is net of ASA account balances. For ASA account balances, the actuarial value of assets is set equal to the market value of assets.

## ***Asset and Liability Allocation***

### **Market Value of Assets Allocation**

	<b>Pre-1996 Account</b>	<b>1996 Account</b>	<b>Total</b>
Member			
Active and Inactive	\$ 2,389,885,851	\$ 655,842,807	\$ 3,045,728,658
Retired	<u>604,123,488</u>	<u>43,384,766</u>	<u>647,508,254</u>
Total Member	\$ 2,994,009,339	\$ 699,227,573	\$ 3,693,236,912
Employer			
Active and Inactive	\$ 0	\$ 1,504,519,247	\$ 1,504,519,247
Retired			
Pension Stabilization Fund	\$ 1,614,425,618	\$ 0	\$ 1,614,425,618
Other	<u>47,451,019</u>	<u>339,506,056</u>	<u>386,957,075</u>
Total	\$ 1,661,876,637	\$ 339,506,056	\$ 2,001,382,693
Total Employer	\$ 1,661,876,637	\$ 1,844,025,303	\$ 3,505,901,940
Total	\$ 4,655,885,976	\$ 2,543,252,876	\$ 7,199,138,852

### **Unfunded Accrued Liability Allocation**

	<b>Pre-1996 Account</b>	<b>1996 Account</b>	<b>Total</b>
<b>Retired Members and Beneficiaries</b>			
ASA Balances and Annuities	\$ 1,057,859,972	\$ 56,695,790	\$ 1,114,555,762
Pension Accrued Liability	6,833,486,063	376,245,889	7,209,731,952
Actuarial Value of Assets*	<u>2,719,200,150</u>	<u>459,468,986</u>	<u>3,178,669,136</u>
Unfunded Accrued Liability	\$ 5,172,145,885	\$ (26,527,307)	\$ 5,145,618,578
<b>Active and Inactive Members</b>			
ASA Balances	\$ 2,142,578,265	\$ 644,352,450	\$ 2,786,930,715
Pension Accrued Liability	5,993,168,782	2,058,238,349	8,051,407,131
Actuarial Value of Assets*	<u>2,389,885,851</u>	<u>2,461,265,904</u>	<u>4,851,151,755</u>
Unfunded Accrued Liability	\$ 5,745,861,196	\$ 241,324,895	\$ 5,987,186,091
<b>Total</b>			
ASA Balances and Annuities	\$ 3,200,438,237	\$ 701,048,240	\$ 3,901,486,477
Pension Accrued Liability	12,826,654,845	2,434,484,238	15,261,139,083
Actuarial Value of Assets*	<u>5,109,086,001</u>	<u>2,920,734,890</u>	<u>8,029,820,891</u>
Unfunded Accrued Liability	\$10,918,007,081	\$ 214,797,588	\$11,132,804,669

\* Actuarial Value of Assets is 120% of Market Value of Assets and is allocated between actives/retirees and Pre-96/Post-96 in the same proportion as Market Value shown above.

## ***Analysis of Financial Experience***

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	<b>Pre-1996 Account</b>	<b>1996 Account</b>	<b>Total Fund</b>
<b>6/30/2008 Unfunded Accrued Liability</b>	<b>\$ 9,838</b>	<b>\$ (122)</b>	<b>\$ 9,716</b>
2008 – 2009 Investment (gain)/loss	704	428	1,132
Demographic experience / 2009 data	137	(32)	105
Miscellaneous Other <sup>2</sup>	(229)	(198)	(427)
Method Change <sup>3</sup>	478	131	609
Net Change	\$ 1,090	\$ 329	\$ 1,419
<b>6/30/2009 Unfunded Accrued Liability<sup>1</sup></b>	<b>\$ 10,928</b>	<b>\$ 207</b>	<b>\$ 11,135</b>

<sup>1</sup> Based on pension and ASA annuities only, i.e. net of ASA account balances.

<sup>2</sup> Miscellaneous Other includes changes due to increases for benefit accruals and expected net interest on assets and liabilities, offset by decreases for contributions and a 13<sup>th</sup> check to retirees in lieu of the 1.5% assumed 2010 COLA.

<sup>3</sup> Change in asset valuation methodology regarding ASA account balances.

**Calculated Employer Contribution Rate**

**1996 Account**

	6/30/2009	% of Projected Payroll for Fiscal 2010	Projected Employer Contribution for Fiscal 2011
Normal Cost	\$ 123,723,604	5.36%	
Amortization of Unfunded Accrued Liability			
Unfunded Accrued Liability*	\$ 207,106,358		
Amortization Factor (30-years, level dollar)	12.6962		
Amortization Payment	\$ 16,312,468	0.71%	
<b>Calculated Employer Contribution Rate</b>	<b>\$ 140,036,072</b>	<b>6.07%</b>	<b>\$ 154,000,000</b>

\* Pension and ASA annuity only

- The dollar contribution, based on calculated rates, is a projection to the 2011 fiscal year at a 10.0% payroll growth rate assumption for the 1996 Account and is provided for illustrative purposes.
- The calculated contribution rate for the 1996 Account is determined as if it were a stand-alone plan.

**Pre-1996 Account**

Expected Pension Benefit Payments	<b>\$ 737,000,000</b>	<b>\$ 784,000,000</b>
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- The Pre-1996 Account is funded on a pay-as-you-go basis. The figures shown above reflect the expected pension payments to be made during fiscal year 2010 and fiscal year 2011.
- Although not shown here, a Pre-1996 Account normal cost plus a 30-year, level-dollar UAL amortization was calculated and has been reflected in the Annual Required Contribution shown in the GASB Disclosures section.

**GASB Statements No. 25 and No. 27**

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**Required Supplementary Information**

Under the Governmental Accounting Standards Board (GASB) Statements No. 25 and No. 27, certain information about the plan is required to be disclosed. The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date	June 30, 2009
Actuarial Cost Method	Entry Age Actuarial Cost Method
Amortization Method	Level Dollar
Amortization Period	30 Years
Asset Valuation Method	4-Year Smoothed Market Value with Corridor
Actuarial Assumptions:	
Investment Rate of Return	7.50%
Projected Pay Increases	3.50 – 12.50% (includes 3.25% wage inflation)
Cost-of-Living Adjustments	1.5% Compounded Annually on Pension Portion

Membership in the plan consisted of the following at June 30, 2009, the date of the latest actuarial valuation:

	<b><u>2009</u></b>
Retired Members and Beneficiaries Receiving Benefits	44,492
Terminated Plan Members Entitled to but Not Yet Receiving Benefits	
Vested	6,858
Nonvested	38,897
Active Plan Members	<u>74,343</u>
Total	164,590

***GASB Statements No. 25 and No. 27***

**Required Supplementary Information**

**Schedule of Funding Progress**

Valuation Date June 30	Actuarial Value of Assets (a)	Entry Age Accrued Liability (b)	Unfunded Accrued Liability (UAL) (b) - (a)	Funded Ratio (a) / (b)	Covered Payroll (c)	UAL as a % of Covered Payroll [(b) - (a)] / (c)
1996	\$ 3,262,619,379	\$ 10,330,788,316	\$ 7,068,168,937	31.6%	\$ 2,878,329,486	245.6%
1997	3,750,138,439	11,044,660,156	7,294,521,717	34.0	2,984,603,913	244.4
1998	4,266,312,063	11,780,174,095	7,513,862,032	36.2	3,094,940,606	242.8
1999	4,970,720,334	12,670,924,443	7,700,204,109	39.2	3,294,326,130	233.7
2000	5,578,046,785	13,115,065,443	7,537,018,658	42.5	3,192,604,492	236.1
2001	5,810,759,564	13,523,825,973	7,713,066,409	43.0	3,318,877,027	232.4
2002	6,176,574,529	14,664,661,236	8,488,086,707	42.1	3,609,470,436	235.2
2003	6,554,364,927	14,747,339,056	8,192,974,129	44.4	3,585,134,913	228.5
2004	6,804,394,627	15,197,925,988	8,393,531,361	44.8	3,651,653,125	229.9
2005	7,065,299,476	16,264,893,444	9,199,593,968	43.4	3,734,329,113	246.4
2006	7,686,688,965	17,365,572,132	9,678,883,167	44.3	3,802,721,221	254.5
2007	8,476,559,086	18,815,812,935	10,339,253,849	45.1	4,267,995,166	242.3
2008	9,034,047,394	18,750,062,742	9,716,015,348	48.2	4,348,535,867	223.4
2009	8,029,820,891	19,162,625,560	11,132,804,669	41.9	4,339,032,221	256.6

**Schedule of Employer Contributions**

Fiscal Year Ending	Valuation Date June 30	Annual Required Contribution	Actual Employer Contribution	Percentage Contributed
1998	1996	\$ 508,940,065	\$ 465,350,488	91.4%
1999	1997	508,259,679	612,349,218	120.5
2000	1998	524,815,537	647,441,260	123.4
2001	1999	547,532,673	689,219,756	125.9
2002	2000	537,789,669	566,226,658	105.3
2003	2001	572,226,197	602,231,775	105.2
2004	2002	638,541,074	438,180,343	68.6
2005	2003	619,186,005	484,778,888	78.3
2006	2004	672,555,533	701,340,085	104.3
2007	2005	742,882,002	753,039,657	101.4
2008	2006	800,059,308	808,128,686	101.0
2009	2007	819,638,258	850,156,195	103.7
2010	2008	952,120,349		
2011	2009	1,048,649,181		

***GASB Statements No. 25 and No. 27***

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**Statement of Plan Net Assets**

**Assets**

Cash and Cash Equivalents	\$ 555,156,000
Securities Lending Collateral	152,142,000
Receivables	
Employer Contributions	\$ 36,168,000
Due from PERF	618,000
Member Contributions	30,073,000
Due from Lottery Commission	0
Securities Sold	153,867,000
Interest and Dividends	<u>34,167,000</u>
Total Receivables	\$ 254,893,000
Investments	
Equity Securities	\$ 2,790,428,000
Debt Securities	3,329,169,000
Other	<u>534,503,000</u>
Total Investments	\$ 6,654,100,000
Capitalized Assets	1,241,000
Insurance Premium Paid in Advance	0
Other	<u>0</u>
Total Assets	\$ 7,617,532,000

**Liabilities**

Accrued Benefits Payable	\$ 67,441,000
Accrued Salaries Payable	167,000
Accrued Liability for Compensated Absences - Current	70,000
Accounts Payable	6,418,000
Due to PERF	1,633,000
Securities Lending Collateral	152,142,000
Payables for Securities Purchased	<u>190,463,000</u>
Total Current Liabilities	\$ 418,334,000
Accrued Liability for Compensated Absences - Long-Term	<u>60,000</u>
Total Liabilities	\$ 418,394,000

**Net Assets Held in Trust for Pension Benefits** **\$ 7,199,138,000**

**GASB Statements No. 25 and No. 27**

**Statement of Changes in Plan Net Assets**

	<b>6/30/2008 thru 6/30/2009</b>
<b>Net Assets at Beginning of Year</b>	<b>\$ 8,563,959,000</b>
Additions	
Contributions	
Member Contributions	\$ 128,568,000
Employer Contributions	819,187,000
Employer Contributions - Pension Stabilization	<u>30,000,000</u>
Total Contributions	\$ 977,755,000
Investments	
Net Appreciation / (Depreciation) in Fair Value	\$ (1,627,148,000)
Interest Income	190,702,000
Dividend Income	76,274,000
Securities Lending Income	11,067,000
Less Investment Expense	
Investment Fees	(34,956,000)
Securities Lending Fees	(6,087,000)
Other	<u>0</u>
Net Investment Income	\$ (1,390,148,000)
Other Additions	
Net Transfers from Other Retirement Funds	\$ 4,260,000
Annuity and Disability Refunds	0
Outdated Benefit Checks	0
Reimbursement of Administrative Expense	<u>0</u>
Total Other Additions	<u>\$ 4,260,000</u>
Total Additions	\$ (408,133,000)
Deductions	
Pension and Disability Benefits	\$ 934,296,000
Distributions of Contributions and Interest	9,613,000
Claims on Outdated Benefit Checks	0
Administrative Expenses	8,070,000
Project Expenses	2,183,000
Depreciation Expenses	1,000
Transfer to Other Retirement Funds	<u>2,525,000</u>
Total Deductions	<u>\$ 956,688,000</u>
Change in Net Assets Held in Trust for Pension Benefits	\$ (1,364,821,000)
<b>Net Assets at End of Year</b>	<b>\$ 7,199,138,000</b>

## ***Member Data***

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The tables below summarize the member data used in the valuation. The pages that follow show various distributions of the member groups.

### **Pre-1996 Account**

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	<b>Males</b>	<b>Females</b>	<b>Total</b>
<b>Number of Actives</b>	<b>7,826</b>	<b>21,471</b>	<b>29,297</b>
- Average Age	54.0	53.6	53.7
- Average Service	27.7	25.4	26.0
- Average Pay	\$ 74,053	\$ 67,577	\$ 69,307
<b>Number of Vested Inactives</b>	<b>1,067</b>	<b>3,383</b>	<b>4,450</b>
- Average Age	57.8	56.9	57.1
- Average Service	21.9	19.2	19.9
<b>Number of Nonvested Inactives</b>	<b>2,488</b>	<b>7,992</b>	<b>10,480</b>
<b>Number of Retirees and Beneficiaries</b>	<b>15,273</b>	<b>27,275</b>	<b>42,548</b>
- Average Age	71.5	72.4	72.1
- Average Years Retired	12.3	12.9	12.7
- Average Monthly Annuity	\$ 207	\$ 161	\$ 177
- Average Monthly Pension	\$ 1,498	\$ 1,213	\$ 1,315
<b>Total Number of Members</b>	<b>26,654</b>	<b>60,121</b>	<b>86,775</b>

### **1996 Account**

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	<b>Males</b>	<b>Females</b>	<b>Total</b>
<b>Number of Actives</b>	<b>12,058</b>	<b>32,988</b>	<b>45,046</b>
- Average Age	38.4	38.3	38.3
- Average Service	9.1	8.1	8.4
- Average Pay	\$ 56,898	\$ 49,184	\$ 51,249
<b>Number of Vested Inactives</b>	<b>620</b>	<b>1,788</b>	<b>2,408</b>
- Average Age	49.2	50.5	50.1
- Average Service	15.9	14.5	14.9
<b>Number of Nonvested Inactives</b>	<b>7,582</b>	<b>20,835</b>	<b>28,417</b>
<b>Number of Retirees and Beneficiaries</b>	<b>812</b>	<b>1,132</b>	<b>1,944</b>
- Average Age	64.9	65.3	65.2
- Average Years Retired	6.0	6.0	6.0
- Average Monthly Annuity	\$ 182	\$ 133	\$ 154
- Average Monthly Pension	\$ 1,652	\$ 1,224	\$ 1,403
<b>Total Number of Members</b>	<b>21,072</b>	<b>56,743</b>	<b>77,815</b>

### **Total**

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	<b>Males</b>	<b>Females</b>	<b>Total</b>
<b>Number of Actives</b>	<b>19,884</b>	<b>54,459</b>	<b>74,343</b>
- Average Age	44.6	44.3	44.4
- Average Service	16.4	14.9	15.3
- Average Pay	\$ 63,650	\$ 56,435	\$ 58,365
<b>Number of Vested Inactives</b>	<b>1,687</b>	<b>5,171</b>	<b>6,858</b>
- Average Age	54.6	54.7	54.7
- Average Service	19.7	17.6	18.1
<b>Number of Nonvested Inactives</b>	<b>10,070</b>	<b>28,827</b>	<b>38,897</b>
<b>Number of Retirees and Beneficiaries</b>	<b>16,085</b>	<b>28,407</b>	<b>44,492</b>
- Average Age	71.2	72.1	71.8
- Average Years Retired	12.0	12.6	12.4
- Average Monthly Annuity	\$ 206	\$ 159	\$ 176
- Average Monthly Pension	\$ 1,506	\$ 1,213	\$ 1,319
<b>Total Number of Members</b>	<b>47,726</b>	<b>116,864</b>	<b>164,590</b>

**Active Members: Pre-1996 Account**

**By Attained Age and Years of Service**

Attained Age	Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	3	-	-	-	-	-	-	3
30-34	2	-	-	-	-	-	-	2
35-39	64	35	371	574	2	-	-	1,046
40-44	88	64	223	1,818	628	3	-	2,824
45-49	58	45	126	830	2,207	779	3	4,048
50-54	47	37	123	793	1,260	2,207	1,488	5,955
55-59	47	23	127	860	1,285	1,320	5,388	9,050
60-64	24	26	59	398	729	735	3,320	5,291
65-69	8	10	23	85	101	107	605	939
70-74	1	7	2	7	10	9	72	108
75-79	-	3	1	5	-	1	12	22
80 & Over	1	-	1	1	2	1	3	9
<b>Totals</b>	343	250	1,056	5,371	6,224	5,162	10,891	29,297

Average Age: 53.7  
Average Service: 26.0

**Active Members: 1996 Account**

**By Attained Age and Years of Service**

Attained Age	Years of Service to Valuation Date							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
15-19	1	-	-	-	-	-	-	1
20-24	1,447	9	-	-	-	-	-	1,456
25-29	6,880	2,237	4	-	-	-	-	9,121
30-34	2,309	5,688	1,527	1	-	-	-	9,525
35-39	1,372	1,971	3,964	439	-	-	-	7,746
40-44	1,018	1,273	1,635	936	178	3	-	5,043
45-49	781	1,023	1,136	485	491	126	-	4,042
50-54	542	781	1,082	430	290	290	123	3,538
55-59	308	510	824	432	304	178	345	2,901
60-64	173	230	337	211	136	70	151	1,308
65-69	83	70	69	27	20	13	17	299
70-74	19	17	8	2	-	1	1	48
75-79	4	7	1	-	-	1	1	14
80 & Over	3	1	-	-	-	-	-	4
<b>Totals</b>	14,940	13,817	10,587	2,963	1,419	682	638	45,046

Average Age: 38.3  
Average Service: 8.4

**Inactive Vested Members: Pre-1996 Account**

**By Attained Age and Years of Service**

Attained Age	Years of Service at Termination							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
35-39	-	-	81	18	-	-	-	99
40-44	-	-	186	95	22	-	-	303
45-49	-	-	232	149	106	15	-	502
50-54	-	-	237	187	152	104	48	728
55-59	-	-	367	275	192	138	286	1,258
60-64	-	-	333	141	154	104	315	1,047
65-69	-	-	102	41	24	25	102	294
70-74	-	-	14	3	3	4	17	41
75-79	-	-	12	2	-	1	1	16
80 & Over	-	-	131	21	6	-	4	162
<b>Totals</b>	-	-	1,695	932	659	391	773	4,450

Average Age: 57.1  
Average Service: 19.9

**Inactive Vested Members: 1996 Account**

**By Attained Age and Years of Service**

Attained Age	Years of Service at Termination							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
30-34	-	-	60	-	-	-	-	60
35-39	-	-	334	20	-	-	-	354
40-44	-	-	239	70	13	-	-	322
45-49	-	-	202	83	45	7	1	338
50-54	-	-	256	110	49	21	7	443
55-59	-	-	236	116	69	34	34	489
60-64	-	-	185	63	38	19	26	331
65-69	-	-	32	14	4	6	5	61
70-74	-	-	4	-	1	-	-	5
75-79	-	-	3	2	-	-	-	5
80 & Over	-	-	-	-	-	-	-	-
<b>Totals</b>	-	-	1,551	478	219	87	73	2,408

Average Age: 50.1  
Average Service: 14.9

***Retired Members: Pre-1996 Account***

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**By Attained Age and Completed Years of Retirement**

Attained Age	Years of Retirement							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
Under 40	11	20	12	6	5	-	2	56
40-44	5	8	4	5	1	-	-	23
45-49	8	13	12	11	1	1	-	46
50-54	76	38	19	18	5	2	3	161
55-59	1,969	219	76	46	29	6	4	2,349
60-64	4,339	3,324	278	74	36	9	5	8,065
65-69	2,301	3,997	2,338	284	69	36	22	9,047
70-74	367	1,713	3,245	1,379	287	43	26	7,060
75-79	18	327	1,695	2,556	856	255	40	5,747
80-84	8	75	259	1,612	1,978	564	248	4,744
85-89	3	5	31	227	1,185	958	462	2,871
90-94	1	2	7	22	134	718	794	1,678
95-99	1	1	-	1	4	61	499	567
100 & Over	-	1	1	-	-	-	132	134
<b>Totals</b>	9,107	9,743	7,977	6,241	4,590	2,653	2,237	42,548

Average Age: 72.1  
Average Years Retired: 12.7

***Retired Members: 1996 Account***

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**By Attained Age and Completed Years of Retirement**

Attained Age	Years of Retirement							Total
	0-4	5-9	10-14	15-19	20-24	25-29	30+	
Under 40	5	1	-	-	-	-	-	6
40-44	2	6	-	-	-	-	-	8
45-49	7	4	-	-	-	-	-	11
50-54	22	8	-	1	-	-	-	31
55-59	198	39	2	-	1	-	-	240
60-64	351	280	18	-	-	-	-	649
65-69	215	288	90	2	-	-	-	595
70-74	36	113	82	24	4	-	-	259
75-79	2	20	35	31	5	1	-	94
80-84	2	4	6	15	12	-	-	39
85-89	-	1	1	1	6	1	1	11
90 & Over	-	-	-	1	-	-	-	1
<b>Totals</b>	840	764	234	75	28	2	1	1,944

Average Age: 65.2  
Average Years Retired: 6.0

***Retired Members: Pre-1996 Account***

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**By Year of Retirement**

Year of Retirement As of June 30	Number	Monthly Pensions	
		Total	Average
Before 1975	727	\$ 321,582	\$ 442
1975	170	94,468	556
1976	219	127,222	581
1977	225	134,798	599
1978	310	195,668	631
1979	383	242,370	633
1980	439	285,334	650
1981	453	293,101	647
1982	429	282,133	658
1983	525	354,298	675
1984	596	416,401	699
1985	851	638,109	750
1986	721	552,753	767
1987	848	697,358	822
1988	961	838,028	872
1989	778	705,694	907
1990	1,212	1,245,834	1,028
1991	1,188	1,311,482	1,104
1992	1,074	1,226,242	1,142
1993	1,132	1,387,432	1,226
1994	1,265	1,581,523	1,250
1995	1,605	2,084,882	1,299
1996	1,587	2,091,685	1,318
1997	1,380	1,804,862	1,308
1998	1,741	2,261,879	1,299
1999	1,595	2,189,369	1,373
2000	1,845	2,631,806	1,426
2001	1,838	2,691,847	1,465
2002	2,135	3,123,112	1,463
2003	1,883	2,883,436	1,531
2004	2,182	3,479,630	1,595
2005	2,089	3,464,213	1,658
2006	2,261	3,865,712	1,710
2007	2,144	3,669,618	1,712
2008	2,549	4,550,663	1,785
2009	1,208	2,242,478	1,856
<b>Totals</b>	<b>42,548</b>	<b>\$ 55,967,022</b>	<b>\$ 1,315</b>

***Retired Members: 1996 Account***

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**By Year of Retirement**

Year of Retirement As of June 30	Number	Monthly Pensions	
		Total	Average
1975	1	\$ 287	\$ 287
1981	1	259	259
1982	1	936	936
1986	2	1,562	781
1987	7	4,981	712
1988	4	2,620	655
1989	6	4,893	816
1990	11	10,280	935
1991	14	13,401	957
1992	12	14,372	1,198
1993	8	7,935	992
1994	18	21,887	1,216
1995	27	31,611	1,171
1996	34	44,267	1,302
1997	32	39,533	1,235
1998	47	54,700	1,164
1999	55	76,034	1,382
2000	89	106,497	1,197
2001	108	147,223	1,363
2002	143	205,300	1,436
2003	170	234,709	1,381
2004	197	277,730	1,410
2005	172	260,981	1,517
2006	171	244,688	1,431
2007	194	262,880	1,355
2008	247	375,520	1,520
2009	173	282,092	1,631
<b>Totals</b>	<b>1,944</b>	<b>\$ 2,727,178</b>	<b>\$ 1,403</b>

This schedule may include individuals who retired from the Pre-1996 Account, returned to work, and then retired again (from the 1996 Account).

## ***Retired Members***

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### **Reconciliation of Benefit Recipients, July 1, 2008 to July 1, 2009**

#### **Pre-1996 Account**

	<b>Number of Members</b>	<b>Sum of Annual Allowances*</b>
Beginning of Year Rolls	40,554	\$ 701,155,236
Added to Rolls	2,344	56,818,750
Removed from Rolls	(929)	(11,062,410)
Net Transfers to 1996 Account	579	11,768,469
Benefit Changes		3,386,613
End of Year Rolls	42,548	\$ 762,066,658
Percentage Increase in Annual Allowances		8.69%
Average Annual Allowances		\$ 17,911

#### **1996 Account**

	<b>Number of Members</b>	<b>Sum of Annual Allowances*</b>
Beginning of Year Rolls	2,263	\$ 43,481,976
Added to Rolls	270	5,145,053
Removed from Rolls	(10)	(119,161)
Net Transfers to Pre-1996 Account	(579)	(11,768,469)
Benefit Changes		(427,067)
End of Year Rolls	1,944	\$ 36,312,332
Percentage Increase in Annual Allowances		(16.49%)
Average Annual Allowances		\$ 18,679

\* Pension plus Annuity

## ***Retired Members***

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### **Number of Benefit Recipients by Benefit Option**

#### **Pre-1996 Account**

<b>Amount of Monthly Benefit*</b>	<b>Option A-1</b>	<b>Option A-2</b>	<b>Option A-3</b>	<b>Option B-1</b>	<b>Option B-2</b>	<b>Option B-3</b>	<b>Survivors</b>	<b>Disability</b>	<b>Total</b>
\$1-\$500	3,113	1,300	327	1,594	492	700	698	120	8,344
\$501-\$1,000	2,546	1,584	434	2,707	868	1,057	252	197	9,645
\$1,001-\$1,500	2,867	1,984	364	3,673	1,186	1,267	119	191	11,651
\$1,501-\$2,000	2,076	1,824	234	2,605	889	1,090	95	73	8,886
\$2,001-\$3,000	906	806	117	1,008	380	439	29	12	3,697
Over \$3,000	60	61	5	127	37	35	0	0	325
<b>Total</b>	<b>11,568</b>	<b>7,559</b>	<b>1,481</b>	<b>11,714</b>	<b>3,852</b>	<b>4,588</b>	<b>1,193</b>	<b>593</b>	<b>42,548</b>

#### **1996 Account**

<b>Amount of Monthly Benefit*</b>	<b>Option A-1</b>	<b>Option A-2</b>	<b>Option A-3</b>	<b>Option B-1</b>	<b>Option B-2</b>	<b>Option B-3</b>	<b>Survivors</b>	<b>Disability</b>	<b>Total</b>
\$1-\$500	112	68	9	78	8	17	17	42	351
\$501-\$1,000	126	74	30	110	18	30	9	24	421
\$1,001-\$1,500	130	77	19	116	37	41	2	7	429
\$1,501-\$2,000	95	67	13	123	30	51	4	3	386
\$2,001-\$3,000	66	55	7	109	22	39	3	1	302
Over \$3,000	11	12	0	20	6	5	1	0	55
<b>Total</b>	<b>540</b>	<b>353</b>	<b>78</b>	<b>556</b>	<b>121</b>	<b>183</b>	<b>36</b>	<b>77</b>	<b>1,944</b>

\* Pension only

***Retired Members***

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**Schedule of Average Benefit Payments by Service at Retirement**

**Pre-1996 Account**

	Years of Service at Retirement						Total
	<10	10-14	15-19	20-24	25-29	30+	
Avg. Monthly Defined Benefit Pension	\$248	\$250	\$469	\$742	\$1,088	\$1,665	\$1,315
Avg. Monthly Annuity	\$12	\$91	\$88	\$121	\$151	\$213	\$177
Avg. Final Avg. Salary at Retirement	\$18,433	\$20,475	\$31,305	\$37,491	\$43,166	\$49,824	\$44,824
Number of Benefit Recipients	40	1,111	3,712	5,057	7,175	25,453	42,548

**1996 Account**

	Years of Service at Retirement						Total
	<10	10-14	15-19	20-24	25-29	30+	
Avg. Monthly Defined Benefit Pension	\$236	\$396	\$621	\$885	\$1,305	\$2,004	\$1,403
Avg. Monthly Annuity	\$33	\$70	\$74	\$124	\$175	\$197	\$154
Avg. Final Avg. Salary at Retirement	\$37,758	\$37,808	\$44,085	\$50,287	\$56,843	\$64,401	\$55,994
Number of Benefit Recipients	26	158	296	234	282	948	1,944

## ***Closed Group Actuarial Projections***

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The schedules on the following pages for the Pre-1996 Account were produced by means of an actuarial projection.

Whereas actuarial valuations provide a snapshot of the Retirement Fund as of a given date, actuarial projections provide a moving picture of Retirement Fund activities. The projected active and retired groups are developed from year to year by applying assumptions regarding pre-retirement withdrawal from service, retirements, deaths, and disabilities. Projected information regarding plan activity produces an expected future benefit payment stream.

Projection results are useful in demonstrating changing relationships among key elements affecting system financial activity. For example, the relationship between annual benefits paid and assets will change over time. Projections are not predictions of specific future events and do not provide numeric precision in absolute terms. The future pension benefits shown in the table are estimates. Actual payments will likely differ from the amounts shown; however, understanding the relative growth is critical.

**Closed Group Projection: Pre-1996 Account**

\$ in Millions

Year Ended June 30	Active Members		Inactive Members	
	Number	Payroll	Number	Pension Benefits Paid
2010	26,366	\$ 1,893.9	49,053	\$ 737.0
2011	23,691	1,761.9	50,789	784.0
2012	21,172	1,629.1	52,292	836.7
2013	18,821	1,497.5	53,558	894.2
2014	16,690	1,372.9	54,473	948.3
2015	14,754	1,254.4	55,125	995.3
2016	13,004	1,142.1	55,524	1,038.3
2017	11,411	1,034.8	55,702	1,078.1
2018	9,966	933.1	55,672	1,114.0
2019	8,676	838.7	55,429	1,145.2
2020	7,521	750.6	54,977	1,171.9
2021	6,493	668.7	54,332	1,194.6
2022	5,572	592.2	53,513	1,213.2
2023	4,754	521.3	52,536	1,227.7
2024	4,022	455.0	51,418	1,237.9
2025	3,359	392.2	50,178	1,244.5
2026	2,765	333.2	48,825	1,246.8
2027	2,240	278.6	47,355	1,244.9
2028	1,793	230.3	45,761	1,238.2
2029	1,419	188.2	44,052	1,226.4
2030	1,105	151.3	42,237	1,210.2
2031	846	119.6	40,343	1,189.0
2032	634	92.6	38,392	1,163.2
2033	466	70.4	36,407	1,132.4
2034	336	52.3	34,396	1,097.2
2035	236	38.0	32,360	1,058.2
2036	162	27.0	30,311	1,015.6
2037	109	18.7	28,267	970.3
2038	71	12.6	26,244	922.6
2039	45	8.3	24,259	873.1

Note: Projections are intended to demonstrate the pattern of future activities and should not be viewed as a prediction of specific dollar amounts in any year.

**Closed Group Projection: Pre-1996 Account (Continued)**

\$ in Millions

Year Ended June 30	Active Members		Inactive Members	
	Number	Payroll	Number	Pension Benefits Paid
2040	26	\$ 4.8	22,329	822.7
2041	13	2.5	20,467	771.7
2042	5	1.0	18,684	720.7
2043	2	0.3	16,990	670.2
2044	1	0.2	15,393	620.6
2045	-	0.1	13,899	572.6
2046	-	0.1	12,509	526.3
2047	-	-	11,224	482.1
2048	-	-	10,042	440.1
2049	-	-	8,957	400.3
2050	-	-	7,965	362.8
2051	-	-	7,061	327.6
2052	-	-	6,239	294.7
2053	-	-	5,493	263.9
2054	-	-	4,817	235.3
2055	-	-	4,207	208.8
2056	-	-	3,657	184.2
2057	-	-	3,163	161.6
2058	-	-	2,721	140.8
2059	-	-	2,327	121.9

Note: Projections are intended to demonstrate the pattern of future activities and should not be viewed as a prediction of specific dollar amounts in any year.

## **Summary of Benefit Provisions**

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### **Regular Retirement**

<b>Eligibility</b>	Age 65 with ten years service or age 60 with 15 or more years of service or if age is at least 55 and the sum of age plus credited service is 85 or more.
<b>Annual Amount</b>	State pension equal to total service times 1.1% of Average Annual Compensation.

### **Early Retirement**

<b>Eligibility</b>	Age 50 with 15 or more years of service.
<b>Annual Amount</b>	State pension is computed as regular retirement benefit, but reduced for each month between age at early retirement and attainment of age 65. The age reduction factor is calculated as the sum of the following: <ul style="list-style-type: none"><li>• 1/10 of 1% for each month from age 60 to 65.</li><li>• 5/12 of 1% for each month from age at early retirement to 60.</li></ul>

### **Deferred Retirement**

<b>Eligibility</b>	Ten years of service. Benefit commences at regular or early retirement eligibility.
<b>Annual Amount</b>	Computed as a regular retirement benefit with state pension based on service and Average Annual Compensation at termination.

### **Disability Retirement**

#### **Classroom Disability Benefit:**

<b>Eligibility</b>	Five years of service.
<b>Annual Amount</b>	\$125 per month plus \$5 per month for each year of service credit over five years.

#### **Alternative Disability Benefit:**

<b>Eligibility</b>	Five years of service and determined to be disabled by the Social Security Administration. Annual verification of Social Security disability is required.
<b>Annual Amount</b>	Computed as a regular retirement benefit using creditable service to the date of disability and without reduction for early retirement. The minimum benefit is \$180 per month.

## **Summary of Benefit Provisions**

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### **Death Before Retirement**

<b>Eligibility</b>	15 years of service. Spouse to whom member had been married for two or more years is automatically eligible, or a dependent may be designated as beneficiary.
<b>Annual Amount</b>	Computed as regular retirement benefit but reduced in accordance with a 100% joint and survivor election.

### **Benefit Increases After Retirement**

No automatic increases after retirement are provided. Periodically, unscheduled increases have been made.

### **Average Annual Compensation**

Average of highest five years of compensation. Years do not need to be consecutive.

### **Member Contributions**

All Fund members are required by state law to contribute 3% of salary contributions to their Annuity Savings Account. These 3% contributions are generally "picked up" by the employer and contributed on a pre-tax basis on behalf of the employee. Extra voluntary contributions by the member are also possible, but on a post-tax basis. At retirement, there are six alternatives for receiving the proceeds of this account, including lump sums, full and partial rollovers, full and partial annuitization of the balance, and deferred distribution.

### **Forms of Benefit Payment (State Pension)**

The normal form of benefit payment (Option A-1) is a single life annuity with a five-year certain period. There are five optional forms of payment available, as listed below. Additionally, members retiring between ages 50 and 62 may integrate their pension benefit with their Social Security benefit by choosing Social Security Integration (Option A-4) in conjunction with the normal form or any other optional form selected. Optional forms of payment are calculated on an actuarial equivalent basis.

- Option A-2: Straight Life benefit with no certain period
- Option A-3: Modified Cash Refund Annuity (operates in conjunction with the Annuity Savings Account)
- Option B-1: 100% Survivorship
- Option B-2: 66 2/3% Survivorship
- Option B-3: 50% Survivorship

State law provides for actuarially-adjusted and re-calculated benefits based on a new optional form election in the event of the death of the member's spouse after retirement.

Optional forms of benefit are calculated based on 7.5% interest with a 40%/60% unisex blend of the 1983 Group Annuity Male Mortality table set back three years and the 1983 Group Annuity Male Mortality table set back seven years.

## **Summary of Actuarial Assumptions and Methods**

The assumptions used in this valuation reflect the study of experience covering the period July 1, 2002 through June 30, 2007.

<b>Investment Return Rate</b>	7.5% per year, compounded annually (net after administrative expenses).
<b>Pay Increase Assumption</b>	Sample increases are shown in a table on the following pages. The assumption for each consists of a merit and/or seniority increase, 3.0% for price inflation, and 0.25% for real wage growth.
<b>Total Active Member Payroll</b>	Assumed to annually increase 10% for the 1996 Account and decrease according to the projection in the Payout Projections section for the Pre-1996 Account for purposes of calculating the projected contribution for the 2010 fiscal year.
<b>Price Inflation</b>	3.0% per year. Price inflation is not directly tied to benefits; however, it is a component of the economic model used to determine total wage inflation.
<b>Mortality</b> <i>Healthy</i>	2008 IRS Static Mortality Table projected an additional 5 years (sex specific).
<i>Disabled</i>	2008 IRS Static Mortality Table projected an additional 5 years (sex specific).
<b>Retirement</b>	Probabilities are shown in tables on the following pages.
<b>Withdrawal</b>	Sample probabilities are shown in tables on the following pages.
<b>Disability</b>	Sample probabilities are shown in a table on the following pages.
<b>Actuarial Cost Method</b>	Entry Age Normal (level percent of pay) method, with a 30-year, level dollar amortization of the Unfunded Accrued Liability arising from all sources including actuarial gains and losses.
<b>Asset Valuation Method</b>	The Actuarial Value of Assets recognizes investment gains and losses in equal installments over four years. However, the Actuarial Value is limited to no more than 20% greater than or 20% less than the Market Value of Assets. Investment experience on ASA account balances is not smoothed.
<b>Marriage Assumption</b>	100% of members are assumed to be married for purposes of valuing death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
<b>Pay Increase Timing</b>	Beginning of (fiscal) year. Payroll amounts stated in the valuation data are amounts projected to be paid during the current year.
<b>Decrement Timing</b>	Decrements are assumed to occur at the beginning of the year.

## **Summary of Actuarial Assumptions and Methods**

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<b>Other</b>	Disability and withdrawal decrements do not operate after member reaches retirement eligibility. Only the withdrawal and death decrements operate during the first ten years of service.
<b>Miscellaneous Adjustments</b>	The calculated liabilities and normal costs were increased by 1% to account for the inclusion of unused sick leave in the calculation of Average Compensation.
<b>Actuarial Equivalence Basis for Optional Forms of Payment</b>	7.5% interest with a 40%/60% unisex blend of the 1983 Group Annuity Male Mortality table set back three years and the 1983 Group Annuity Male Mortality Table set back seven years.
<b>Explicit Expense Load</b>	None.
<b>COLA Assumption</b>	1.5% compounded annually on pension portion.
<b>Employee Census and Asset Data</b>	Census and asset information was furnished as of the valuation date by the Fund's Administrative Staff. Although examined thoroughly for reasonableness and consistency with prior years, the data was not otherwise audited by the Actuary.

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The actuarial valuation computations were made under the supervision of a Member of the American Academy of Actuaries (MAAA).

**Summary of Actuarial Assumptions and Methods**

**Probabilities of Age and Service Retirement**

Regular Retirement		Rule of 85 Retirement		Early Retirement	
Age	Probability	Age	Probability	Age	Probability
				50-53	0.015
				54	0.030
		55	0.160	55	0.040
		56	0.130	56	0.050
		57	0.135	57	0.060
		58	0.145	58	0.070
		59	0.160	59	0.080
60	0.180	60	0.180		
61	0.220	61	0.220		
62	0.250	62	0.250		
63	0.200	63	0.200		
64	0.250	64	0.250		
65	0.350	65	0.350		
66	0.300	66	0.300		
67	0.200	67	0.200		
68	0.250	68	0.250		
69	0.300	69	0.300		
70	1.0000	70	1.0000		

**Probabilities of Disability**

Attained Age	Age-Based	
	Male	Female
25	0.0001	0.0001
30	0.0001	0.0001
35	0.0001	0.0001
40	0.0001	0.0001
45	0.0002	0.0002
50	0.0005	0.0005
55	0.0009	0.0009
60	0.0010	0.0010

**Summary of Actuarial Assumptions and Methods**

**Probabilities of Withdrawal**

Years of Service	Service-Based	
	Male	Female
0	0.3500	0.3500
1	0.1400	0.1500
2	0.1000	0.1200
3	0.0800	0.0950
4	0.0600	0.0850
5	0.0500	0.0750
6	0.0450	0.0650
7	0.0400	0.0550
8	0.0350	0.0500
9	0.0300	0.0450

Attained Age	Age-Based*	
	Male	Female
25	0.0250	0.0400
30	0.0250	0.0400
35	0.0230	0.0340
40	0.0180	0.0200
45	0.0130	0.0150
50	0.0350	0.0350
55	0.0350	0.0350
60	0.0350	0.0350

\*Age-Based rates apply only if 10 or more years of service.

## ***Summary of Actuarial Assumptions and Methods***

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### **Pay Increase Assumption**

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<b>Years of Service</b>	<b>Merit &amp; Seniority</b>	<b>Base (Economic)</b>	<b>Total</b>
1	9.25%	3.25%	12.50%
5	4.50%	3.25%	7.75%
10	3.25%	3.25%	6.50%
15	2.00%	3.25%	5.25%
20	0.75%	3.25%	4.00%
25	0.25%	3.25%	3.50%
30	0.25%	3.25%	3.50%
35	0.25%	3.25%	3.50%
40	0.25%	3.25%	3.50%

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## **Definitions of Technical Terms**

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<b>Accrued Service</b>	Service credited under the system that was rendered before the date of the actuarial valuation.
<b>Accrued Liability</b>	The difference between the actuarial present value of future benefit payments and the actuarial present value of future normal costs. Also referred to as “actuarial accrued liability” or “past service liability”.
<b>Actuarial Assumptions</b>	Estimates of expected future experience with respect to rates of mortality, disability, turnover, retirement, rate of investment return, and pay increases. Decrement assumptions (rates of mortality, disability, turnover, and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (pay increases and investment return) consist of the underlying rates in an inflation-free environment plus a provision for a long-term average rate of inflation.
<b>Actuarial Cost Method</b>	A mathematical budgeting procedure for allocating the dollar amount of the “actuarial present value of future benefit payments” between future normal costs and actuarial accrued liabilities. Sometimes referred to as the “actuarial funding method”.
<b>Actuarial Equivalent</b>	One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.
<b>Actuarial Gain (Loss)</b>	The difference between actual unfunded actuarial accrued liability and anticipated unfunded actuarial accrued liability — during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.
<b>Actuarial Present Value</b>	The single amount now that is equal to a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest and by probabilities of payment.
<b>Amortization</b>	Paying off a present value with periodic payments.
<b>Normal Cost</b>	The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as “current cost”.
<b>Unfunded Accrued Liability</b>	The difference between the accrued liability and the actuarial value of assets. Sometimes referred to as “unfunded past service liability” or “unfunded actuarial accrued liability” or simply as “unfunded liability”.

## ***The Actuarial Valuation Process***

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The **actuarial valuation** is the mathematical process by which a contribution rate is determined. The flow of activity constituting the valuation may be summarized as follows:

- A. Covered Person Data:** Furnished by the Plan Administrator
  - Retired Members and Beneficiaries Now Receiving Benefits
  - Former Employees with Vested Benefits Not Yet Payable
  - Active Members
  
- B. + Asset Data (Cash and Investments):** Furnished by the Plan Administrator
  
- C. + Estimates of Future Experience (Actuarial Assumptions):** Established by the Board of Trustees after Consulting with the Actuary
  
- D. + Funding Method:** The Allocation of Employer Costs to Past Service, Current Service, and Future Service
  
- E. + Mathematically Combining the Assumptions, the Funding Method, and the Data**
  
- F. = Determination of:**
  - Plan Funded Status and Employer Contribution Rate

## ***Funding Objective***

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The funding objective of the ISTRF 1996 Account is to establish and receive contributions that, when invested at the assumed rate of return, will ultimately accumulate assets over each member's working lifetime that will be sufficient to pay expected retirement allowances.

### **Fund Structure and Funding Arrangements**

The Indiana State Teachers' Retirement Fund (ISTRF) is comprised of a two-account structure in compliance with Indiana Code Section 21-6.1-2-2:

- The **Pre-1996 Account** consists of those members who were hired prior to July 1, 1995, and who have maintained continuous employment with the same school corporation or covered institution since that date.
- The **1996 Account** consists of those members who were:
  - a. hired on or after July 1, 1995 or
  - b. hired before July 1, 1995 and prior to June 30, 2005, and subsequently served in a position covered by ISTRF were either hired by another school corporation or institution covered by ISTRF, or were re-hired by a covered prior employer.

### **Characteristics of the Pre-1996 Account**

1. Active membership in the Pre-1996 Account continues to decline as members quit, become disabled, die, retire, or incur a change in status as described in (b) above, thereby automatically transferring to membership in the 1996 Account.
2. The pension benefits from the Pre-1996 Account are funded by State appropriations (including short-term contributions of some revenue from the State Lottery). Annuity benefits payable from the Pre-1996 Account are funded by the annuitization of Pre-1996 Account member contributions at the time of retirement.

### **Characteristics of the 1996 Account**

1. If the 1996 Account were a stand-alone plan, a normal pattern of departures and hirings would produce a fairly constant population size. However, overall active membership in the 1996 Account is expected to increase over time due to the following factors:
  - a. As Pre-1996 Account members depart from active service, their replacements will become members of the 1996 Account; and
  - b. The special provisions of Indiana Code Section 21-6.1-2-2 require that any member who changed jobs within the System or who was re-hired within the System during the period July 1, 1995 - June 30, 2005 after a period of absence were moved to the 1996 Account..
2. Pension benefits payable from the 1996 Account are funded by contributions from local school corporations or other institutions that employ covered members. Annuity benefits payable from the 1996 Account are funded by the annuitization of 1996 Account member contributions at the time of retirement.

## ***Plan Structures and Funding Arrangements***

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### **Funding Arrangements**

Prior to the legislation that established the two-account structure in ISTRF, the pension benefits of the Indiana State Teachers' Retirement System were funded on a pay-as-you-go system. Under this arrangement, amounts were appropriated to meet the current year's pension payment requirements. Pension benefits payable from the Pre-1996 Account continue to be funded on this basis. In 1995, the Pension Stabilization Fund was set up for the Pre-1996 Account. Since then, some pre-funding progress has been made via State appropriations to this Account.

Pension benefits payable from the 1996 Account are funded through percent-of-pay contributions. The Teachers' Retirement Board sets this contribution rate after reviewing the most recent actuarial valuation report. The contribution rate for fiscal 2010 of 7.00% was set by the Board in fiscal 2009. The contribution rate for fiscal 2011 of 7.50% was set by the Board in fiscal 2010.

February 9, 2010

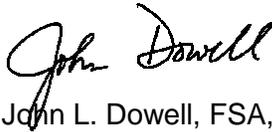
Ms. Julia A. Pogue  
Chief Financial Officer  
Indiana State Teachers' Retirement Fund  
150 West Market Street, Suite 300  
Indianapolis, IN 46204-2809

Dear Julia:

Enclosed are 12 copies of the actuarial valuation of active and inactive members and retired lives of ISTRF as of June 30, 2009.

Sincerely,

Nyhart

A handwritten signature in black ink that reads "John Dowell". The signature is written in a cursive style with a large initial "J".

John L. Dowell, FSA, EA, MAAA

/lmw  
222-1

Enclosures

cc: Michael Zurek